

REMARKS

This paper is timely filed as it is submitted with a certificate of mailing under 37 C.F.R. §1.8, a petition for a one-month extension of time, and a check for the required petition fee under 37 C.F.R. §1.17(a)(1) thereby extending the response date to May 18, 2006.

I. OBJECTIONS TO CLAIMS 1, 3, 4 AND 18

Applicants respectfully traverse the objection of claims 1, 3 and 4 due to claim informalities. Claims 1, 3 and 4 are amended, as suggested by the examiner, to provide for clear antecedent basis of various terms therein, and are not amended to overcome the cited prior art. Applicants submit that the informalities identified by the examiner are corrected.

Applicants respectfully traverse the provisional objection of claim 18, which is similar in nature to, but is considered to be broader in at least some respects, than claim 8. In particular, claim 8 recites two elements written in mean-plus-function format under 35 U.S.C. §112, ¶ 6, while claim 18 does not recite any means-plus-function elements, and instead recites two physical devices and a routine. As is clear from the language of 35 U.S.C. §112, ¶ 6 and from the judicial interpretation thereof, elements written in means-plus-function format are to be construed to cover the corresponding structure and material disclosed in the specification and equivalents thereof. Claim 18, on the other hand, is not limited to being construed in this manner. Because claims 8 and 18 may be construed differently, these claims are not of substantially the same scope, and therefore the presence of both of these claims in a single application should not give rise to a double patenting objection.

II. REJECTION UNDER 35 U.S.C. §102(b)

Applicants respectfully traverse the rejection of claims 1-6, 8, 12-15 and 18 as anticipated by Rosenof ("Data Logging and Reporting for Effective Batch Control"). Reconsideration and withdrawal of this rejection is respectfully requested in light of the remarks provided below.

Generally speaking, each of claims 1-6, 8, 12-15 and 18 recites an event historian, a batch history view application or a batch history viewer that is used in a batch process to collect (1) process event information comprising batch process data related to the operation of the process equipment within a process plant (e.g., the

valves, tanks, etc. that are actually performing the batch process) and (2) batch procedure event information, including batch subprocedure event information, from a batch control device (e.g., the process controller that controls the process equipment to perform the batch process). Additionally, the recited event historian or the viewing device derives relationships between the batch procedure event information (including one or more batch subprocedures which make up a batch procedure) and the process event information to thereby be able to display the batch process data in a manner that illustrates how the batch process data (e.g., device alarms, measurements, etc.) relate to the batch procedure being performed (such as which batch subprocedure was being performed when a particular device alarm arose). In this manner, a user may view or be able to easily determine what batch procedure or subprocedure was taking place when a particular piece of process equipment failed, sent an alarm or other notification, experienced a particular process condition, etc. This ability to view the batch process data (e.g., process equipment alerts and alarms) in a manner that is coordinated with or that identifies the batch subprocedure that was occurring on the equipment at the time, aids operators and other users to better diagnose problems or to better understand the operation of the batch process.

In the past, while an event historian collected batch process data indicative of the state of the process equipment (such as alarms and alerts generated by batch process equipment), a user had little or no way of easily determining the batch subprocedure that was occurring when the process equipment data arose or was generated. Independent claims 1, 8 and 18 provide systems that overcome this problem and, in particular, recite (1) collecting batch process event data from process devices within a process plant running a batch process, (2) collecting batch procedure event information from a batch control device (e.g., the batch process controller) indicative of, for example, the batch subprocedure being run and (3) deriving relationships between these two types of data. In this manner, disparate types of data such as the process event information received from batch process devices (e.g., field devices) and the batch procedure or subprocedure event information received from a batch control device are automatically linked together to “provide a comprehensive, understandable presentation”¹ of the operation of the batch process to the user.

¹ See Discussion of Related Art section on page 6, lines 22–24 of the application as originally filed.

Rosenof simply fails to disclose or suggest deriving relationships between batch subprocedure event information collected from a batch process controller and process event information collected from various process devices implementing the batch process, such as valves, sensors, etc. As a result, Rosenof fails to anticipate any of claims 1-6, 8, 12-15 or 18.

While Rosenof appears to disclose the use of a data logging file to collect and store batch procedure event data from various batch control devices (which data is indicative of milestones or dividing points defining the batch procedures) and the use of other data logging files to collect process event data, such as alarms, measurements, etc. generated by, for example, field devices used to implement the batch process, Rosenof does not disclose or suggest deriving relationships between the collected batch procedure event information and the collected process event information. Instead, Rosenof is similar to the prior art referred to in the "Discussion of Related Art" section of the application, in that Rosenof merely collects the different types of data (i.e., the batch procedure event information and the batch process event information) in different files without trying to associate these various different types of data with one another in order to provide for operator ease in determining, for example, the batch subprocedure that was being implemented by the process controller when a particular process event (such as a device alarm) occurred within one of the physical devices being used to implement the batch procedure.

The examiner appears to rely on Figs. 5 and 6 of Rosenof for the disclosure of determining relationships between batch subprocedure event information and process event information. Unfortunately, neither Fig. 5 nor Fig. 6 of Rosenof illustrates a relationship between these different types of data, as these figures only illustrate one of these types of data, i.e., batch procedure event information. In particular, Fig. 5 illustrates a data file that includes the times associated with the occurrence of or the beginning of, as stated by the examiner, "various stages of the process" (see Office Action dated January 18, 2006, page 4, lines 8-9). Fig. 6 merely provides a graphical depiction of the data in Fig. 5. Thus, importantly, the data file of Fig. 5 of Rosenof only stores the times at which different batch procedural events (such as the charging of a reactant, the taking of a sample, etc.) occurred within a particular batch process. As a result, the data in Fig. 5 is only batch procedure event information. The data log of Fig. 5 does not include any actual process event information, such as device alarms

generated by process devices (e.g., valves, sensors, etc.) or any data collected by such devices. Instead, collected process event data is stored in a separate log file illustrated in Fig. 4 of Rosenof, and Rosenof provides no indication of any manner of incorporating the data of Fig. 4 into the table of Fig. 5 or any manner of displaying the data of Fig. 4 on the display of Fig. 6.

Put another way, the data file of Fig. 5 of Rosenof merely stores data indicating the times associated with “milestone” events of the batch procedure (see Rosenof, page 32, column 2, lines 9-12), which is simply another way of defining a specific part of a particular batch procedure. Thus, the data stored in the file of Fig. 5 and illustrated in Fig. 6 of Rosenof relates only to batch procedure event information, not to process event information, which is data collected from or sent from the devices actually implementing the various phases of the batch procedure. More particularly, each of the “events” illustrated in Fig. 5 is an event that the batch controller determines to exist based on predetermined programming within the controller associated with defining the batch procedure, and is thus merely batch procedure event information, not process event information.

Because Rosenof does not derive or illustrate relationships between batch procedure event information and process event information, the reports illustrated in Figs. 4-6 of Rosenof do not enable a user to see or easily determine relationships between batch procedure event information (e.g., data indicative of what portion or part of the batch is being implemented) and process event information (e.g., data indicative of specific measurements or alarms generated by devices implementing the batch procedure). Thus, as is the case with other prior art tools discussed in the application, the Rosenof system still requires an operator to manually derive relationships between the collected process event data (such as that of Fig. 4 of Rosenof) and the collected batch procedure event data (such as that of Figs. 5 and 6 of Rosenof).

Because Figs. 5 and 6 of Rosenof are limited to the storage and display of batch procedure event information, these figures do not determine or display any relationships between batch procedure event information and process event information, as specifically recited by each of claims 1-6, 8, 12-15 and 18. As a result, Rosenof does not anticipate any of these claims.

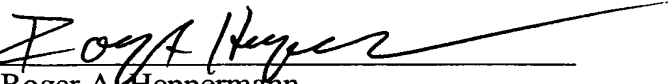
Moreover, it is clear that the prior art must make a suggestion of or provide an incentive for a claimed combination of elements to establish a *prima facie* case of obviousness. See, *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985). Rosenof simply fails to provide any suggestion of or motivation for determining relationships between process event information, such as that shown in Fig. 4 of Rosenof, and batch procedure event information, such as that of Figs. 5 and 6 of Rosenof, much less for displaying process event information in the same display as batch procedure event information. In fact, it is not clear how or even if the information of Fig. 4 could be shown in the display of Fig. 6 of Rosenof. Because Rosenof fails to suggest or provide any manner of determining relationships between process event information and batch procedure event information, it follows that Rosenof does not render any of claims 1-6, 8, 12-15 or 18 obvious.

III. CONCLUSION

For the foregoing reasons, applicants submit that the application is in condition for allowance. Reconsideration and withdrawal of the rejections and allowance of the rejected claims are therefore respectfully requested. If there are any additional fees or refunds required, the Commissioner is hereby authorized to charge or credit Deposit Account No. 13-2855 (under order number 06005/36359) from which the undersigned attorney is authorized to draw. A copy of this paper is included herewith for this purpose.

Respectfully submitted,

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